



## Chelmsford Amateur Radio Society Annual General Meeting and Happy Hour

The Annual General Meeting provides the opportunity for members to receive up-to-date reports on the status of the club's management and finances as well as air their opinions on past and future activities; this is a necessary and important function in any Society.

Following the reports prepared by the present committee, they will retire and the President will invite actions:-

- 1) Nominations for the new committee.
- 2) Voting for the committee election.
- 3) The setting of the subscription rate.
- 4) Suggestions for future meetings.

All the members of the present committee have offered their services if elected, however, if any nominations or volunteers are proposed to join the committee, the normal democratic process of election will be conducted.

After the election of the new committee, the meeting will be invited to discuss a proposal to raise funds towards the cost of upgrading the club Transceiver with particular emphasis on improved filters for CW operation. Then follows the nominations and voting for our Annual Award of Merit. To add interest to the evening, we will draw the Jackpot Raffle for a Years free subscription to CARS, in addition to our regular raffle draw. Finally but not least, Jan G7UVP has devised a "Happy Hour" which should get the room

buzzing. We look forward to seeing you in the Marconi College at 7.30pm on Tuesday 1<sup>st</sup> October.

### DATES FOR YOUR DIARY

29 Sept. HARLOW & DISTRICT RALLY - Sports Centre.  
1 Oct. C.A.R.S ANNUAL GENERAL MEETING.  
18/19 Oct. LEICESTER AR EXHIBITION - Granby Halls.  
5 Nov. CLUB MEETING - The Annual Junk Sale.

### SPECIAL DATE FOR YOUR DIARY

As announced last month, the Christmas Social will be held at the Marconi College on Saturday 14<sup>th</sup> December. Details of the menu cost and meeting time will be in the November Newsletter. Ela will have the reservation tickets for sale at the November club meeting.

### DF News - Dick G3WHR, Chelmsford Events.

#### The Chelmsford DF Trophy

This is awarded to the competitor with the best performance in any four of the Chelmsford Local Events. This year our congratulations and the Trophy go to Phillip Cunningham. When the trophy has been engraved (the engravers will have no excuse for mis-spelling the winners name) I hope Phillip will be able to attend one of our club meetings to receive it.

Results	Points
1 Phillip Cunningham	29
2 Tim Parker	25
3 Dick Brocks	22
4 Peter Larbalestier	18
5 Andrew Mead	14
6= Mike Hawkins	9
6= Ian Butson	9
8 Roy Emeny	7
9 Richard DeLaRue	6
10 Peter Graves	4
11 Colin Merry	3

More DF News  
on page 2.

### LAST MONTHS MEETING - Jan, G7UVP

#### SSTV - The Bigger Picture

Following Chris's success with last years talk on JVFAX, his encore was to encompass the other programs available for Slow Scan TeleVision (SSTV), together with some hints and tips for JVFAX users.

The array of equipment on show would put many computer shops to shame, but as Chris was to explain, the level of equipment needed to get started in slowscan TV can be very low. Particularly as it is now possible to pick up old PC's at rallies much in the same way it used to be possible to pick up old radios for conversion.

The first program on display was JVFAX. This is now version 7.1. The main enhancements(?) over version 7.0 are the removal of the facility to read and save .GIF files as this is now subject to a licensing fee, and the addition of thumb-nail pictures to select which picture to send. Several other minor bugs have also been fixed, such as the ability to now return to a batch file. Some have also been introduced, with the most amusing being the thumb-nail pictures shown upside down when using standard VGA mode.

Chris showed us how JVFAX can be used in conjunction with other programs. By using Image Alchemy, and creating small batch files, it is possible to increase the types of files that JVFAX can read. The ability to run programs from JVFAX is hidden in the enhanced setup menu, available by typing <ESC> from the bottom of the normal configuration file. Inspired by this information I think some of us may sit down and read the manual.

The next program demonstrated was GSH-SSTV. This is a dedicated SSTV program, and is better than JVFAX in many respects. The same radio to computer interface is used for this program as for JVFAX. The program was more demanding on the type of computer required. It needs at least a 386 and a VESA video card. This is because the program can handle 24 bit (True Colour) images.

Chris showed us the important START.BAT file which inserts your callsign and name in the program. Like JVFAX, this program has a detailed manual supplied, which was recommended reading. The timing setup (to get a straight picture) was fairly straightforward. If the picture was out of alignment, a correction factor can be entered by calling up a reference line and adjusting it to what should have been a vertical line. For aligning the receive signal, GSH-SSTV has a very fancy 'scope facility. The transmit and receive modes available are much the same as in JVFAX. (turn to page 2)

## LAST MONTHS MEETING - continued.

As with all good presentations, Chris saved the best until last. The latest addition to the Slow Scan TV software library is WinPix-Pro. This program is different from the others as it runs under Windows 3.1 or Windows 95 and uses a soundblaster card for processing the audio. Unlike the other software, it is not Shareware. It costs £100, and for that sort of money you would expect a very professional program. Chris explained that the high cost of the software was due to the author needing to use commercial utilities which carry a distribution cost.

The software had a very professional look to it. It boasted all the usual modes of SSTV transmission and receive, and 4 new ones. These were ATV, for Amiga TV with 5 different modes available, GVA (named after the software author), P, also after the author (Pasakon) and PD after the two authors, Paul (G4JE) and Don (K0KHI). The advantage of the newer modes is enhanced colour definition. In the demonstration, Chris explained how the new mode send one colour in detail and then the difference of the other two colours. This could be clearly heard as each line was transmitted, first a "normal" warble, followed by two "crackly" sounds similar to a fax transmission. The additional detail meant it took longer to send, but from the demonstration the enhanced colours could be clearly seen.

In addition to SSTV modes, WinPix-Pro offers a single FAX mode, 480, this being the number of lines per minute. As it uses a stereo sound card, it is possible to use two radios at once.

During the tea break there was a great deal of interest in the various packages. Talking to the members, I think everyone felt WinPix-Pro was a terrific program but overpriced, but quite a few people were interested in trying the demonstration program.

After tea Chris discussed some of the methods of obtaining pictures to send. For those who use the Kodak photo CD, these provide a simple way of sending pictures captured by an ordinary camera.

Digital cameras are now available, but still expensive at about £600. Chris showed us a Video Blaster card linked to a video camera. We then had the dubious honour of having our pictures sent across the room. Some excellent results have been obtained by using flat bed scanners, but we were advised against using the hand scanners, as these are difficult to produce consistent results. CD's of pictures are easily found at rallies, often for only a few pounds. Finally, it is possible to make your own pictures using graphics packages like MS Paint for Windows, Neopaint or Tempra for DOS users.

With two excellent talks in the bag, we look forward to Chris's third to make the hat-trick. A big thank you Chris from all who attended.

## DF NEWS - RSGB National Events

### The Bert Simmonds Trophy

The Rosebowl is awarded to the competitor with the best overall performance in RSGB Qualifying events.

For several years this Trophy has been the goal of Andrew Mead and Philip Cunningham (see - Almost Ours in Dec 94 Newsletter). It's a much sought after Trophy and to win it requires consistent high performance and the dedication to attend all eight National Qualifying events - held as far apart as Torquay and Manchester. This year the name engraved on the Trophy will be P. Cunningham. We congratulate Philip and Andrew for a superb effort and look forward to a future article OURS - THIS TIME.

## DF NEWS

### The RSGB Council Trophy

This year the National Final is being held in Essex/Suffolk, with the event being organised jointly by Chelmsford and Colchester Clubs on behalf of the RSGB. We have local interest in 6 of the 17 teams competing on Sunday 22<sup>nd</sup> September and hope to retain the Trophy.

## NEWS EXTRA

As we go to press the news is that Brian Bristow was the winner, so the trophy goes to Mid-Thames. Our best was Andy Collett who came third.

Full story in the next edition.

## C.A.R.S. ANNUAL AWARD

At the AGM, our Society Award of Merit will be presented to a member who has made a substantial achievement in the field of Amateur Radio during the past year. Nominations should be made in writing and given or sent to a committee member.

## COMMITTEE MEETING

The next Committee meeting will be held at 7.30pm on Wednesday 9<sup>th</sup> October, in Telford Lodge, you are welcome to join us.

## A Low Frequency Experience - Dick G3WHR

On the 29th April 1996 the RA announced the new amateur frequency band 71.6 to 74.4 kHz. With the necessary Notice of Variation to their licence, UK amateurs can now try out LF propagation. For me it began five years earlier, in April 1991.

"How would you like a trip to Scotland", they said?, "we need someone to go with Curt Brown". Somewhere in the Northern Isles a military LF transmitter had gone off-tune and the site repair team had appealed for assistance. Twenty years earlier, Curt had been one of the original design team, so if he couldn't fix it then nobody could. Well I had more hair then and could stand the exposure to a northern climate - so I said yes.

Thus began my one and so far only experience with LF transmitters. It was a very different world to my HF/VHF transistor amplifiers. Firstly, few items of test equipment operate below 80kHz; so it was down into the crypt air-raid shelters and a rummage through dusty shelves to find an ancient GDO which covered the frequency range.

At the airport we were questioned, what is the large radar opaque object in your luggage - ah it was electrical apparatus, perhaps its function could be demonstrated. Fortunately the security person was of an age that could appreciate that equipment need to warm up before operating. The sight of a moving meter needle was sufficient for us to gain access to the aircraft.

If you go to the Northern Isles - don't pack your coat in your case, you may need it for the 2 minute walk between aircraft and terminal building. It was a distinctly damp engineer who learned about Scottish rainfall that day.

After an hours travel by car we arrived at the transmitter site, easily identified by the 600ft mast. At the base of the aerial was the ATU building and nearby the transmitter buildings. The transmitter was large enough to have a room of its own. On opening the front doors my first thought was that, like Alice, I had suddenly shrunk in size. Everything inside was about ten times the size that I was used to; capacitors the size of waste bins, and inductors wound with water piping. Fortunately there was no sign of a giant microprocessor.

The transmitter was not at all well; its drive source was indicating low signal, the tuning discriminators were faulty, the earthing switch had a horrible spongy feel to its action, and rain had come down the cooling duct and turned the copper anodes of the PA valves green.

We checked the on-site spares - they were in a worse state than the transmitter, no help there - everything would have to be fixed/repaired by us. I would be learning a lot about LF transmitters this trip.

We started to pull things apart, some of the Jones plugs had been in and out many times and the plating had worn off the plug pins. The output stage was easy to get at, when disconnected it slid out from the main chassis like a filing cabinet drawer. Just one problem - when new, the dc blocking capacitor on the output stage had two connecting lugs - but there was only one left now. We took good care to preserve the remaining lug; the capacitor was full of toxic PCB and a replacement was out of the question.

By evening we had convinced ourselves that the low signal level from the LF drive was a metering fault and that we had sufficient output for the transmitter.

Next day, and with the aerial safely earthed, I got my first look at the inside of the ATU building. If the transmitter had made me seem small then the inside of the ATU building made me minute. This time I could walk amongst the components. The thing about LF is that all aerials are much shorter than you would like and consequently have low radiation resistance and are very capacitive. The only way to get power into them is to resonate the capacitance with a series inductor and be prepared for a lot of arial current. This results in a spectacularly sized tuning coil seven feet in diameter and up to 15 feet high, wound with 1 inch diameter Litz wire. To take account of variation in earth impedance the inductor has to be variable which is achieved by a Variometer. I'd seen Variometers before - the WWII WS19 tank radio uses one, but this LF Variometer was the size of a mini car. Another thing that comes with LF aerials is high voltage - about 150kV, so the clearance between the primary and secondary windings of the mains transformer which powers the red lights of the mast is about 1 foot. In order to protect the fabric of the ATU building from the rf voltage fields, it has to be completely covered in copper sheeting - both inside and out.

*This article complete with a photograph will continue next month - Ed.*

73 from Roy & Ela Martyr,  
G3PMX & G6HKM

☎ (01245)360545

🚗 (0385)546963

Email 101710.2022@compuserve.com

1, High Houses,  
Mashbury Road,  
Great Waltham,  
CHELMSFORD,  
Essex, CM3 1EL.